

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Currently Amended) A training system to train a user, comprising:
at least one real asset having real asset data;
a transceiver coupled to the real asset;
at least one simulator ~~adapted to that~~ simulates an asset to enable a user to train to use the asset; and
a bridge coupled between the at least one simulator and the transceiver ~~[[,]]~~ whereby that facilitates the training and can be carried out using both the at least one real asset and the simulated asset in concert transmits the real asset data to the simulator, with the simulator using the real asset data to simulate the asset to train the user.
2. (Original) The system of claim 1, wherein the bridge comprises a computer readable medium having computer readable program code embodied thereon.
3. (Original) The system of claim 2, wherein the computer readable program code comprises a piecewise polynomial interpolation algorithm.
4. (Original) The system of claim 2, wherein the computer readable program code, when executed, computes an equation for a curve to fit the real asset data received

by the bridge, interpolates the real asset data based on the computed curve, and repeats the computing and interpolating steps until no new real asset data is received by the bridge such that a plurality of curves representing the motion of the real asset are created.

5. (Original) The system of claim 4, wherein the computer readable code, when executed, dead reckons the real asset data and interpolates the real asset data based on the computed curves when the bridge stops receiving the real asset data.

6. (Original) The system of claim 5, wherein the computer readable code, when executed, smooths each curve created by the bridge.

7. (Original) The system of claim 1, wherein the bridge further comprises a simulator adapted to simulate a strike target asset comprising at least one of munitions, tanks and missile launchers.

8. (Original) The system of claim 1, wherein the bridge comprises a recorder adapted to record the real asset data.

9. (Original) The system of claim 8, wherein the recorder comprises means for playing back the real asset data recorded by the recorder.

10. (Original) The system of claim 1, wherein the bridge comprises a filter adapted to restrict the flow of real asset data and simulated asset data therethrough.

11. (Original) The system of claim 1, wherein the bridge is configured to support a plurality of simulation communication protocols, and wherein the simulation communication protocols comprise at least one of a distributed interactive stimulation protocol, a high-level architecture protocol and a training enabling architecture protocol.

12. (Original) The system of claim 1, further comprising at least one communication link between the transceiver and the bridge, wherein the bridge is configured to support a plurality of different communication links, and wherein the communication links comprise at least one of a link 16, link 4A, link 22, VMF, SINCGARS/ESIP, Havequick, T-ACELINT, and DAMA.

13. (Original) The system of claim 12, wherein communication between the real asset and the bridge is two-way.

14. (Original) The system of claim 1, wherein the real asset is at least one of a flight asset and a strike target asset.

15. (Currently Amended) A real asset-to-simulated environment bridge, comprising:

a computer readable medium having computer readable program code embodied thereon which when executed couples at least one real asset to a simulated environment;
and

when executed, the computer readable medium computes an equation for a curve to fit real asset data received by the bridge, interpolates the real asset data based on the computed curve, and repeats the computing and interpolating steps until no new real asset data is received by the bridge such that a plurality of curves representing the motion of the real asset are created.

16. (Original) The real asset-to-simulated environment bridge of claim 15, wherein the computer readable program code comprises a piecewise polynomial interpolation algorithm.

17. (Cancelled)

18. (Currently Amended) The real asset-to-simulated environment bridge of claim ~~[[17]]~~15, wherein the computer readable program code, when executed, dead reckons the real asset data and interpolates the real asset data based on the computed curves when the bridge stops receiving the real asset data.

19. (Original) The real asset-to-simulated environment bridge of claim 18, wherein the computer readable code, when executed, smooths each curve.

20. (Original) The real asset-to-simulated environment bridge of claim 15, wherein the bridge comprises a recorder adapted to record real asset data received from the real asset.

21. (Original) The real asset-to-simulated environment bridge of claim 20, wherein the recorder comprises means for playing back the real asset data recorded by the recorder.

22. (Original) The real asset-to-simulated environment bridge of claim 15, wherein the bridge comprises a filter adapted to restrict the flow of real asset data and simulated asset data therethrough.

23. (Original) The real asset-to-simulated environment bridge of claim 15, wherein the bridge is configured to support a plurality of simulation communication protocols, and wherein the simulation communication protocols comprise at least one of a distributed interactive simulation protocol, a high-level architecture protocol and a training enabling architecture protocol.

24. (Original) The real asset-to-simulated environment bridge of claim 15, wherein the bridge is configured to allow for two-way communication between the real asset and the simulated environment.

25. (Original) The real asset-to-simulated environment bridge of claim 15, wherein the bridge further comprises a simulator adapted to simulate a strike target asset comprising at least one of munitions, tanks and missile launchers.

26. (Original) The real asset-to-simulated environment bridge of claim 15, wherein the bridge is configured to support a plurality of communication links, wherein the communication links comprise at least one of a link 16, link 4A, link 22, VMF, SINCCARS/ESIP, Havequick, T-ALELINT and DMA.

27. (Currently Amended) A method of providing a bridge between at least one real asset having real asset data and a simulated environment, comprising:

- (1) receiving a set of real asset data periodically from the real asset;
- (2) computing an equation for a curve to fit the real asset data received;
- (3) interpolating real asset data based on the computed equation to create a curve; ~~and~~
- (4) ~~repeating the steps of computing and interpolating (3) and (4)~~ until no new real asset data is received such that a plurality of curves representing the motion of the real asset are created; and
- (5) transmitting the motion of the real asset to the simulated environment.

28. (Original) The method of claim 27, further comprising dead reckoning the real asset data and interpolating the real asset data based on the computed curves when the bridge stops receiving the real asset data.

29. (Original) The method of claim 28, further comprising smoothing each curve.

30. (Original) The method of claim 27, further comprising recording the real asset data.

31. (Original) The method of claim 30, further comprising playing back the recorded real asset data.

32. (Original) The method of claim 27, further comprising filtering the flow of data between the real asset and the simulated environment.

33. (Original) The method of claim 27 wherein the real asset is at least one of a flight asset and a strike target asset.